

Work Order ID 105594

\*105594\*

Page 1

August-08-13 1:00:26 PM

Item ID: D205-634-041

Accept

\*N900040100\*

Setup Start

\*NS1\*

Revision ID:

Stop

\*NS2\*

Item Name: Replacement Skidtube Fits LH or RH

Start Date: 8/08/13

Start Qty: 2.00

\*2\*

Cust Item ID:

Required Date: 8/08/13

Req'd Qty: 2.00

\*2\*

Customer:

Reference: RA111596

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

\*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D2580-041

F

100

0.00

\*100\*

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

WHITE LABELS ONLY - NO B/N

130

QC5- Inspect part completeness to step on W/O

0.00

\*130\*

QC

Memo

0.00

Quality Control

INSPECT RA111596  
RECORD S/N

140

0.00

\*140\*

Skid tubes

Memo

0.00

Skid tubes

STEP 2 ON REPAIR SCHEME 1010

2 0 13/08/09



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\*105594\*

Page 2

August-08-13 1:00:26 PM

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Required Date: 8/08/13 Req'd Qty: 2.00

\*2\*

Customer:

Reference: RA111596

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

\*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

\*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC10- Inspect visual per QSI004- ground welds	0.00							
*150*	<i>S QCS inspect Removal at 2 paces</i>								
QC	<i>B10/08</i> Memo	0.00							
Quality Control	STEP 3 ON RS1010								
155		0.00							
*155*									
Skidtubes	Memo	0.00							
Skidtubes	STEP 4 ON RS1010								<i>DL/man 13/08/12</i>
165		0.00							
*165*									
QC	Memo	0.00							
Quality Control	STEP 5 ON RS1010								



# Work Order ID 105594

**\*105594\***

Page 3

August-08-13 1:00:26 PM

Item ID: D205-634-041 Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Replacement Skidtube Fits LH or RH  
 Start Date: 8/08/13 Start Qty: 2.00 **\*2\*** Cust Item ID:  
 Required Date: 8/08/13 Req'd Qty: 2.00 **\*2\*** Customer:  
 Reference: RA111596

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	Pressure Wash per QSI005 4.3	0.00							
<b>*170*</b>									
HandFinish	Memo	0.00							
Hand Finishing	STEP 4A ON RS1010								
175		0.00							
<b>*175*</b>									
QC	Memo	0.00							
Quality Control	STEP 5 ON RS1010								
220		0.00							
<b>*220*</b>									
Packaging	Packaging	0.00							
Packaging	Memo								
Packaging	REPACKAGE - NO B/N REQ'D SEE QC FOR PAPERWORK - NO ARC								

2 X 4 m/f 13/08/12

DAS  
16  
9-89 13/08/12

1 8 13-8-13



**Work Order ID 105594****\*105594\***

Page 4

August-08-13 1:00:26 PM

Item ID: D205-634-041

Accept

**\*N900040100\***

Setup Start

**\*NS1\***

Revision ID:

Stop

**\*NS2\***

Item Name: Replacement Skidtube Fits LH or RH

Start Date: 8/08/13 Start Qty: 2.00

**\*2\***

Cust Item ID:

Required Date: 8/08/13 Req'd Qty: 2.00

**\*2\***

Customer:

Reference: RA111596

Run Start

**\*NR1\***

Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop

**\*NR2\***

QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

230

QC21- Final Inspection - Work Order Release

0.00

**\*230\***

QC

Memo

0.00

Quality Control

CLOSE W/O FOR 0

SEE PAT S/ QC FOR PAPERWORK- NO ARC

MCS 1308-13

MF

13-8-12





# Picklist Print

August-08-13 1:00:24 PM

Page 1

Work Order ID: 105594

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube Fits LH or RH

Start Date: 8/08/13

Required Date: 8/08/13

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30  
 KJ IPP Rev P 10.02.19 per PAR09-043 EC  
 verified by:DD  
 IPP Rev. O 06.02.28 Added paperwork EC  
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q 10.12.01 as per chg003  
 DD verf:EC IPP REV:R 12.01.23 AS PER ECN11-684 VER:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3-5A Bolt		Purchased	No				Each	680.0000		X4		Jul 13/08/12	
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				FP001		12							
				122800		12							
				GA		120							
				117423		120							
				ST350		22							
				120187		22							
				ST512		526							
				122416		19							
				124561		507				X4			
D205-634-041 Replacement Skidtube Fits LH or RH		Manufactured	No				Each	6.0000		2			
				<u>Location</u>		<u>Loc Qty</u>	<u>Loc Code</u>						
				FG		2							
				87804		1							
				98808		1							
				FG073		4							
				100659		1							
				102221		1							
				102625		1							
				99575		1							



# Picklist Print

August-08-13 1:00:26 PM

Page 2

Work Order ID: 105594

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube Fits LH or RH

Start Date: 8/08/13

Required Date: 8/08/13

Start Qty: 2.00

Required Qty: 2.00

D4202-1  
Spacer

Manufactured No

Each 609.0000

8

Location

Loc Qty

Loc Code

LG

605

96906

4

98699

69

99216

532

LG002

4

97447

4

NAS1149D0332J

Purchased No

Each 2,841.0000

Washer

Location

Loc Qty

Loc Code

ST293

37

125268

37

ST294

2804

122973

106

125044

278

m125807

2420

u x 4 13/08/12

x 4

August-08-13 1:00:26 PM

Shop Packet Print

Page 2







<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	
<b>Description:</b> Repair Scheme for Canadian D205-634-041 Skidtube (Replacing crack crossbolt spacers)			
<b>Drawing:</b> D2580-041		<b>Repair Scheme:</b>	<b>RS1010</b>
<b>Part No:</b> D205-634-041		<b>Page:</b>	<b>2 of 1</b>
<b>Batch No:</b>		<b>Qty:</b>	


Rev	Date	Change Description	Prepared	Checked	Approved
A	13.04.04	New Issue	DD		

U:\Admin\Forms\RepairschembIA.doc

Rev. A





# RA 111596 D205-634-011

## Re-work

Received @ Dart August 2<sup>nd</sup>, 2013  
Inspected @ Dart August 6<sup>th</sup>, 2013

CUSTOMER: CANADIAN HELICOPTERS  
CUSTOMER CONTACT: CHRIS WIERINGA  
SHIPPED FROM: LES CEDERS PQ, CANADA

1596  
Instructions for RA 111585 D205-634-041 C130729A & C130729  
Re-work

- Tubes are here for re working same re work scheme that David Duvall had original created for the previous re work
- Remove all cross bolt spacers in the fwd. & aft saddles and the GHW areas
- Remove the aft cap
- Swage in new D4202-1 per DEO D2580-E-1
- "clean" up only area around the saddles and GHW and re alodine in those locations
- Reinstall aft cap with new sikaflex and with new AN3-5A bolts and NAS1149D0332J washers qty x 2 each of each skid tube

- 
- Both tubes need the same re-work work orders
  - Were removed from aircraft C-FYZE
  - Removal tags are with the RA

Time Estimate = 10 HOURS

Departments Required: Stores, Landing Gear & Finis

Pictures Attached = NO

QTY INSPECTED = x1 D205-634-041 ????  
x1 D205-634-041 ????

6463810

**THIS INSTRUCTION SHEET MUST  
BE ATTACHED TO THE  
RESTOCKING WORK ORDER AT  
ALL TIMES!!!!**



LIST OF MATERIALS					
ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			18	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7		4		D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19	20	20	24	D4202-1	SPACER
20			1	D4406-041	WEARPLATE ASSEMBLY
21			1	D4406-043	WEARPLATE ASSEMBLY
22	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
23	50	50		AN3C4A	BOLT
24	2	2	2	AN3-5A	BOLT
25			8	AN4-45A	BOLT
26	50	50		NAS1149C0332R	WASHER (AN960C10L)
27	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
28			8	MS21042-4	NUT (OR MS21042L4)

# GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB  
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.2  
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs  
D2580-045 = 34.5 lbs  
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241-281.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

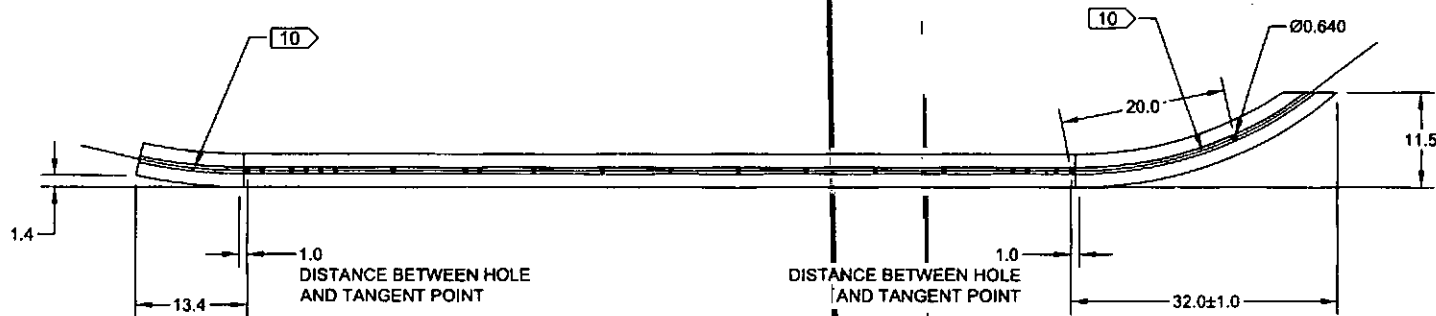
RELEASED  
2013-07-13

F	INCORPORATE DEO D2580-E-1 PER PAR12-218	DC	13.06.20
E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1: REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS D2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.18
REV.	DESCRIPTION	BY	DATE
DESIGN	DC	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DC		
CHECKED	RF	DRAWING NO.	REV. F
MFG. APPR.	DD	D2580	SHEET 1 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	HS	205 SKIDTUBE ASSEMBLY	NTS
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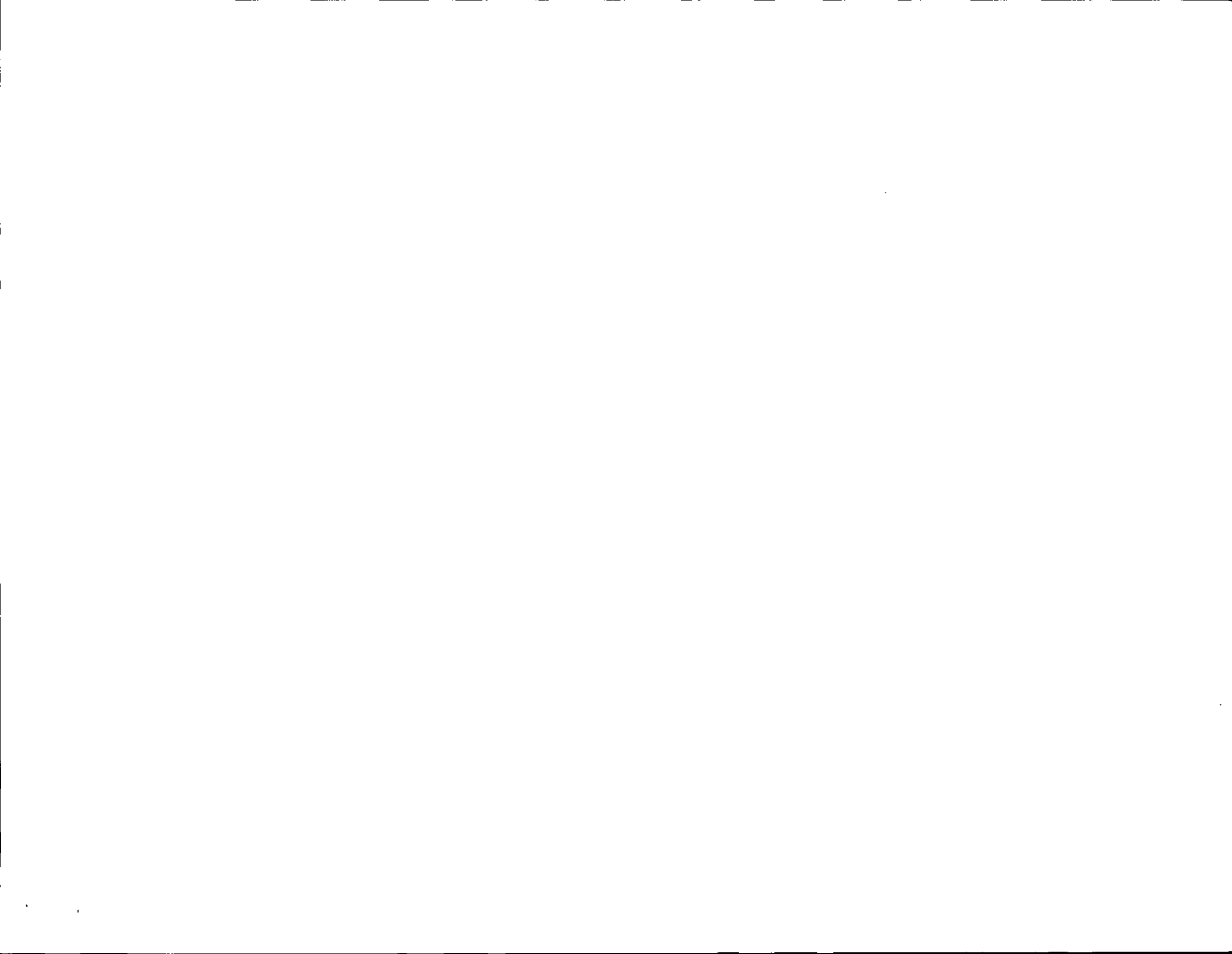




D2580-1 BENT TUBE  
(MAKE FROM D2580-101 TUBE)

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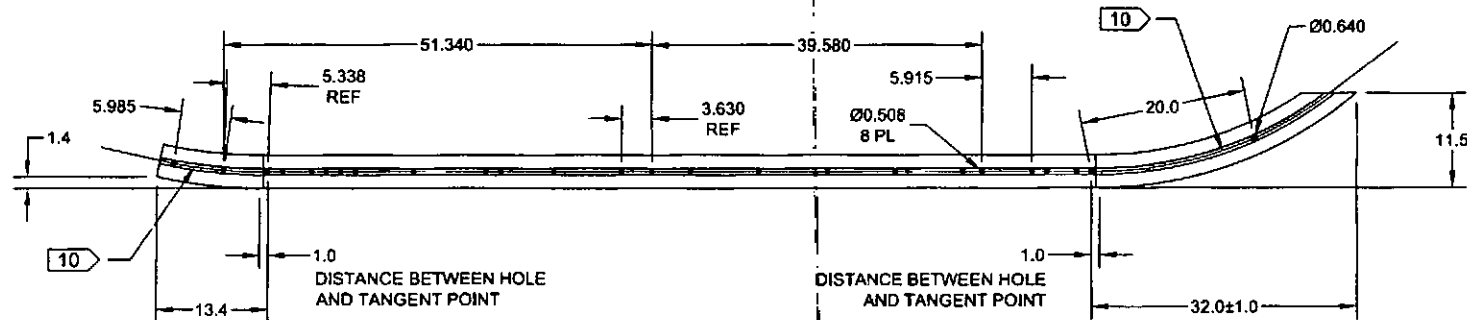
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CHECKED	DD	DRAWING NO.	REV. F
MFG. APPR.	HS	D2580	SHEET 3 OF 8
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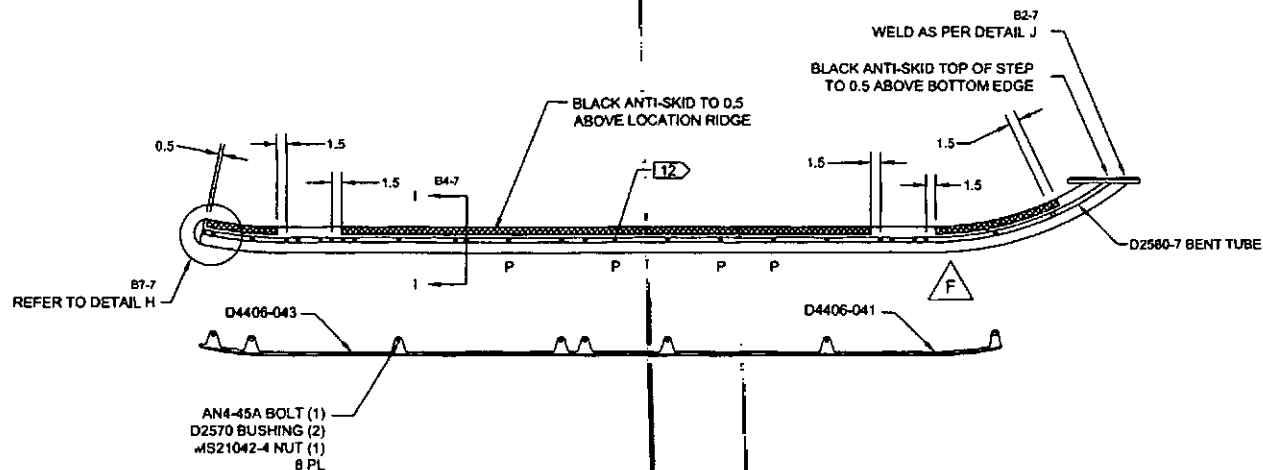


**D2580-5 BENT TUBE**  
(MAKE FROM D2580-101 TUBE)

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2013-07-15  
*MD*

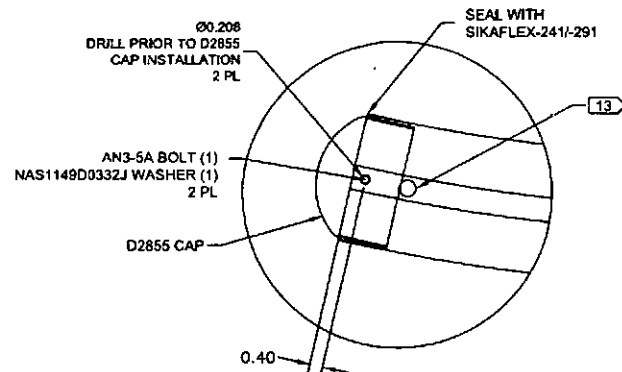
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CHECKED	RF	DRAWING NO.	REV. F
MFG. APPR.	DD	D2580	SHEET 5 OF 8
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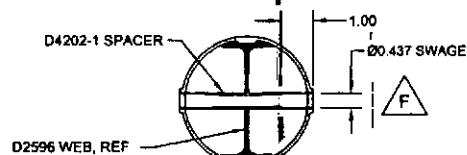


D2580-047 ASSEMBLY DETAIL

DETAIL H 06-7  
SCALE 5X

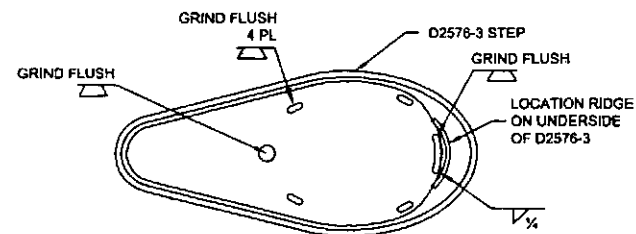


SECTION I-I 05-7  
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:  
1. INSERT D4202-1 SPACER (24 PLACES)  
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002  
3. TRIM/GRIND FLUSH PER QSI 002

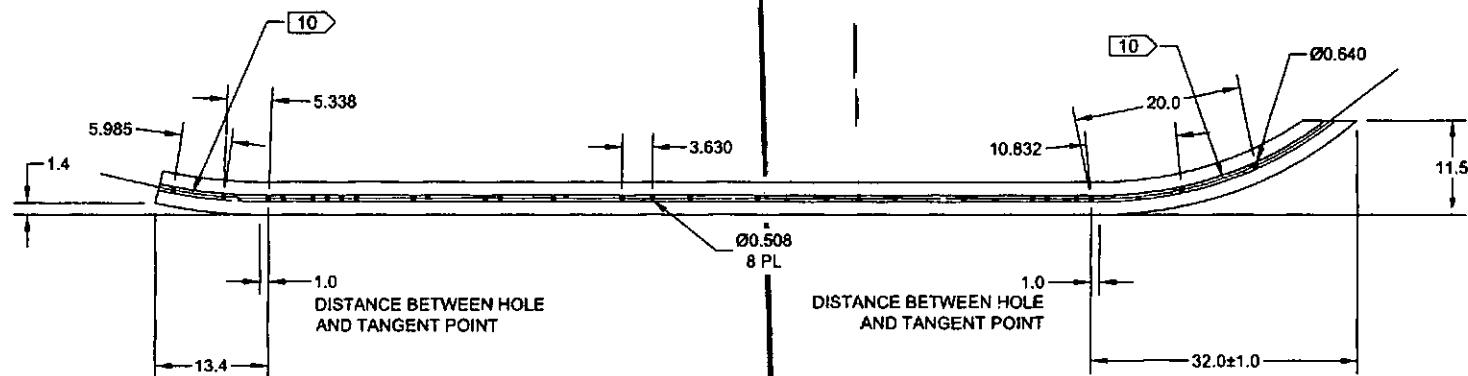
DETAIL J 03-7  
SCALE 5X



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DRAWN	DC	HAWKESBURY, ONTARIO, CANADA	
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D2580-7 BENT TUBE  
(MAKE FROM D2580-101 TUBE)

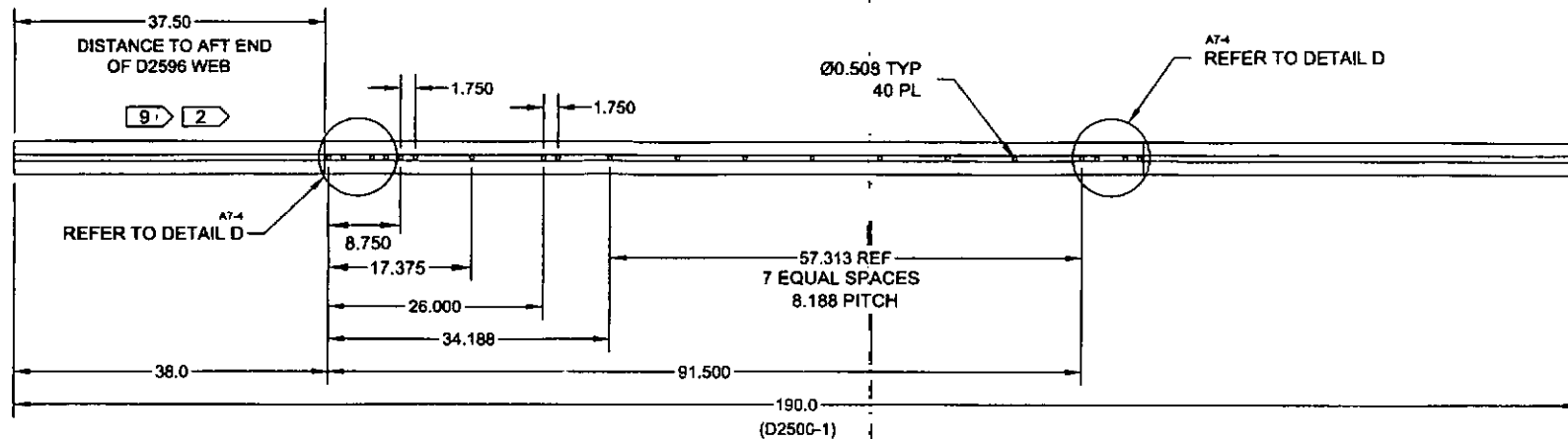
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DRAWN	RF	DRAWING NO.	REV. F
CHECKED	DD	D2580	SHEET 7 OF 8
MFG. APPR.	HS	TITLE	SCALE
APPROVED	NTS	205 SKIDTUBE ASSEMBLY	NTS
DE APPR.		DATE	13.06.20

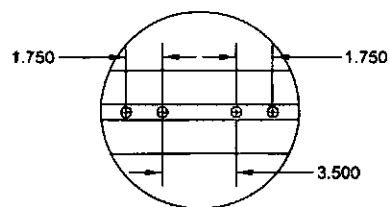
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D2580-101 TUBE



DETAIL D D3-4  
SCALE 5X C7-4

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